

DOCKET FILE COPY ORIGINAL

**ORIGINAL**

Before the  
**Federal Communications Commission**  
Washington, D.C. 20554

**RECEIVED**

MAY - 4 1998

FEDERAL COMMUNICATIONS COMMISSION  
OFFICE OF THE SECRETARY

In the Matter of )  
)  
Fees for Ancillary or Supplementary )  
Use of Digital Television Spectrum )  
Pursuant to Section 336(e)(1) )  
of the Telecommunications Act of 1996 )

MM Docket No. 97-247

**To:** The Commission

**Comments of the  
National Association of Broadcasters and  
the Association for Maximum Service Television, Inc.**

Henry L. Baumann  
Jack N. Goodman  
Valerie G. Schulte

NATIONAL ASSOCIATION  
OF BROADCASTERS  
1771 N Street, N.W.  
Washington, D.C. 20036  
(202) 429-5430

Mark R. Fratrik, Ph.D.  
NAB Research & Planning

Victor Tawil  
Senior Vice President  
ASSOCIATION FOR MAXIMUM  
SERVICE TELEVISION, INC.  
1776 Massachusetts Avenue, N.W.  
Washington, D.C. 20036  
(202) 861-0344

No. of Copies rec'd 048  
List ABCDE

May 4, 1998

## Table of Contents

Summary.....	ii
Introduction.....	2
The Definition of a Feeable Service Should Reflect Congressional Intent .....	5
The FCC Should Assess Fees on the Gross Revenues from Feeable Ancillary or Supplementary Services Carried on DTV Channels.....	7
Fees based on an auction model.....	8
Fees based on net revenues .....	9
“Hybrid” fees.....	11
Fees based on gross revenues.....	12
The Commission Should Set a Low Fee to Encourage Development of New Services .....	13
Conclusion .....	18
Attachments	

## Summary

Congress required the FCC to adopt fees on ancillary and supplementary services that are offered by broadcasters on digital television channels if subscription or other non-advertising payment is required for the service. In setting these fees, the FCC should proceed with some caution since there is no way to confidently predict which types of ancillary services may eventually be offered. Although the primary use of DTV channels will certainly be free television service, the FCC should avoid making choices that would discourage the development of innovative services, since the Commission has long recognized the benefits that the public can derive from new services offered on broadcast channels.

The Commission's proposed definition of a feeable service is too broad and is contrary to Congressional intent. The proposed definition would reach any service supported by non-advertising revenue. The appropriate test is whether subscription or other non-advertising payment is necessary to receive the service, the definition described in the House Report on the Telecommunications Act.

The *Notice* asks for comment on four different models for determining fees. The Commission properly concluded that it would be impossible to establish a fee based on the amounts equivalent spectrum brought at auction given the dynamic nature of ancillary and supplementary services. While a fee based on net revenues might, in a perfect world, best encourage the development of innovative services since it would only tax services that met with market success, a net revenue approach would entail extensive licensee disclosures and complex FCC decisions on allocation of joint costs. Using net revenues to set fees would, therefore, impose high costs on licensees and the Commission. A "hybrid" fee consisting of an upfront payment and a royalty on revenues would discourage higher risk services, reducing overall consumer welfare.

Setting fees based on the gross revenues received from feeable ancillary and supplementary services would impose the fewest costs on the FCC and licensees. While a fee on gross revenues could discourage innovation to some extent because it would impose costs on services before they are profitable, the Commission can ameliorate those effects by refraining from collecting fees for two years after a broadcaster first receives revenues from each feeable service. Fees then would be collected on services that have demonstrated marketplace acceptance.

Broadcasters commissioned two economic studies to assist the FCC in setting a fee. Both economists stress that the high risks associated with untried ancillary and supplementary services dictate that the Commission set a low fee to encourage innovation. The studies suggest two measures of value for the FCC to examine in setting fees. One looks at the values that have been obtained in spectrum auctions and concludes that spectrum value has been declining by more than 30 percent each year, and will continue its downward trend. It also finds that particularly low values are associated with spectrum to be used for new and uncertain ventures. Since that characterizes ancillary and supplementary DTV services, the evidence from the Commission's spectrum auctions points to setting a low fee.

The other study examines the rates negotiated in private licensing of patents and other intellectual property rights. Again, where the prospects of success are uncertain, values in those negotiations tend to be low. Many of those licenses fall at two percent or less of gross revenues, with a majority at five percent or less.

NAB and MSTV, therefore, suggest that the FCC adopt a fee of two percent of gross revenues for feeable ancillary and supplementary DTV services, commencing two years after a broadcaster first receives revenue from each feeable service.

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

In the Matter of	)	
	)	
Fees for Ancillary or Supplementary	)	MM Docket No. 97-247
Use of Digital Television Spectrum	)	
Pursuant to Section 336(e)(1)	)	
of the Telecommunications Act of 1996	)	

**To:** The Commission

**Comments of the  
National Association of Broadcasters and  
the Association for Maximum Service Television, Inc.**

The National Association of Broadcasters ("NAB")<sup>1</sup> and the Association for Maximum Service Television, Inc. ("MSTV")<sup>2</sup> [hereinafter collectively "Broadcasters"] submit these comments on the Commission's *Notice of Proposed Rule Making*. Broadcasters urge the Commission to adopt a fee of two percent of the gross revenues received from feeable ancillary and supplementary services, beginning two years after a station receives revenue from such a service.

---

<sup>1</sup> NAB is a non-profit, incorporated association of radio and television stations and broadcast networks. NAB serves and represents the American broadcasting industry.

<sup>2</sup> MSTV is a non-profit membership organization representing more than 330 of the nation's television stations in regulatory, legislative, and judicial proceedings.

## Introduction

With this proceeding, the Commission lays another stone in the foundation supporting the Nation's transition from analog to digital television broadcasting. It adopted a visionary technical standard for digital broadcasting;<sup>3</sup> it allocated channels for digital television service;<sup>4</sup> and it assigned channels for digital service during the transition.<sup>5</sup> In this proceeding, it will determine the fees that digital broadcasters must pay if they offer certain types of ancillary and supplementary services in addition to their traditional free television service. There remains the need to adopt rules for cable carriage of digital television signals, a proceeding that the Commission has indicated it will begin in the near future, and then, the change from analog to digital television service can truly begin in earnest.

In some respects, this proceeding is unlike the others. Without a technical standard and a channel assignment plan, digital service could not begin. In the absence of assurances that all digital television signals can be received by the cable subscribers who constitute the majority of television viewers, digital television will not thrive. By contrast, digital television service can begin – indeed the offering of ancillary and supplementary services can begin – without the Commission's having adopted a method of collecting fees for those services. Nonetheless, since Congress directed the FCC to adopt a method for collecting fees from broadcasters who offer

---

<sup>3</sup> *Advanced Television Systems (Fourth Report and Order)*, 11 FCC Rcd. 17771 (1996).

<sup>4</sup> *Advanced Television Systems (Fifth Report and Order)*, 12 FCC Rcd. 12809 (1997).

<sup>5</sup> *Advanced Television Systems (Sixth Report and Order)*, 12 FCC Rcd. 14588 (1997), *recon.*, FCC 98-24 (rel. Feb. 23, 1998).

certain types of ancillary and supplementary services. 47 U.S.C. § 336(e), it is appropriate for the Commission to establish an initial fee program at this time.

In doing so, however, the Commission should be mindful of the limitations imposed on its decision by the embryonic nature of digital television. The attentions of most television broadcasters are now focused on meeting the Commission's ambitious schedule for rolling out digital service across the country. Few, if any, have even begun to develop plans for ancillary and supplementary services, much less business plans for such services. Thus, Broadcasters are unable to provide an answer to the Commission's request in paragraph 26 of the *Notice* for information about the types of ancillary services that stations might provide or the level of revenues that might be expected from such services. The most that can be said with any confidence is that, as digital television develops, broadcasters will experiment with a variety of ancillary services to determine whether they are compatible with digital television technology, whether there is a market demand for such services, and whether particular services can be offered profitably. Nonetheless, regardless of whether some types of ancillary services become successful, the primary use to which digital television channels will be put will be free, over-the-air television service.

Because any conclusions about the likely nature and amount of ancillary and supplementary services and the revenues that might be derived from them must be entirely speculative, the Commission should proceed with some caution in order to avoid making a decision that – even unintentionally – would alter the amount and mix of services that broadcasters might develop in the future. As the Commission recognizes (*Notice* ¶ 11), "[a] fee set too high would serve as a disincentive for broadcasters to provide feeable ancillary and supplementary services. It could

reduce the benefits that consumers receive from services provided on the DTV capacity."

Indeed, the Commission has long recognized the benefits to the public interest from permitting additional services over broadcast frequencies. For example, in *Subsidiary Communications Authorizations*, 53 RR 2d 1519, 1523 (1983), the Commission eliminated an earlier requirement that FM subcarrier services be limited to "broadcast related" activities, reasoning that "we are particularly impressed with the potential for additional communications services without the need for additional allocations of valuable spectrum."

Moreover, as part of the process leading to the adoption of the Telecommunications Act of 1996, the Administration strongly advocated encouraging flexible use of broadcast spectrum. It told the Congress that "it is neither 'unfair,' nor a 'windfall' for broadcasters if they were permitted . . . to develop alternative uses for the frequencies for which they have been licensed. Such 'flexible use' would both promote efficient use of spectrum . . . and encourage the development of new services."<sup>6</sup> As the Commission considers various proposals for fees on ancillary and supplementary services, therefore, it should continue to value highly the public benefits that can be obtained from encouraging the introduction of new services.

To assist the Commission, broadcasters commissioned two studies by leading economists of the factors relevant to a fee program. Attachment A is a statement by Professor Jerry A. Hausman of the Massachusetts Institute of Technology. Professor Hausman has studied the economics of television and the communications industry for many years, and has submitted testimony to the FCC and to Congress on many communications issues. Professor Hausman

---

<sup>6</sup> Letter from the Honorable Larry Irving to Congressman Edward J. Markey, March 10, 1994, at Attachment page 1.



discusses the objectives the Commission should seek in establishing a fee program. He also reviews the history of the Commission's spectrum auctions and concludes that the value of spectrum is declining, particularly in auctions for new and untested services. Given the statutory directive that fees for ancillary and supplementary services mirror, if possible, what providers of comparable services might have bid at auction, Professor Hausman's study of falling auction prices suggests that ancillary and supplementary service fees should reflect this downward trend.

The Hausman study also points to research demonstrating that "[s]uccessful new services lead to hundreds of millions or billions of dollars of increased consumer welfare." Attachment A at 9. Thus, Hausman concludes, "the Commission should be especially careful in creating a distortion that could limit the introduction of new ancillary services by DTV providers." *Id.*

Attachment B is a study by Dr. Kent A. Anderson of National Economic Research Associates, Inc. Dr. Anderson's study also suggests ways in which the Commission should approach the fee-setting process. He examines the rates that have been paid in recent negotiations for patents and intellectual property licenses as a guide to an appropriate rate for a fee on ancillary or supplementary services. We will discuss these two studies in more detail, but first turn to the question of which services should be subject to a fee.

### **The Definition of a Feeable Service Should Reflect Congressional Intent**

Paragraph 8 of the *Notice* seeks comment on the services to which fees should apply. The Telecommunications Act defined feeable services as ones "for which the payment of a subscription fee is required to receive such services, or . . . for which the licensee directly or indirectly receives compensation from a third party in return for transmitting material furnished

by such third party (other than commercial advertisements used to support broadcasting for which a subscription fee is not required)." 47 U.S.C. § 336(d)(1). The *Notice* proposes that fees be applied to "any ancillary or supplementary services that are not supported entirely by commercial advertisements."

That definition is too broad. It could be read to encompass any number of services which are available without subscription, but are supported by sources in addition to advertising. That would be contrary to Congressional intent. The House Report on the Telecommunications Act indicated that the Commission would be required to "establish a fee program for any ancillary or supplementary services if subscription fees or any other compensation fees apart from commercial advertising *are required in order to receive such services.*"<sup>7</sup> The line dividing feeable and non-feeable services is not whether a service has some level of non-advertising support, but instead whether a subscription or other fee is required to receive the service. Thus, subscription video or data services are subject to fees, as well as services which consist of data or other information transmitted to recipients for a fee charged to the supplier of the information.

Services which do not fall within those models should not be deemed feeable. For example, a broadcaster might receive additional compensation for a freely available channel

---

<sup>7</sup> H. REP. NO. 204, 104<sup>th</sup> Cong., 1<sup>st</sup> Sess. 117 (1995), *reprinted in* 1996 U.S.C.C.A.N. 10, 85 (emphasis added). The conference bill's provisions with respect to fees for ancillary and supplementary services were based on the House bill. H. REP. NO. 458, 104<sup>th</sup> Cong., 2<sup>d</sup> Sess. 161, *reprinted in* 1996 U.S.C.C.A.N. 124, 173-74. Indeed, the Administration favored an even narrower definition of feeable services. It told the Congress that "fees should be charged for the use of broadcast spectrum to provide new services not now permitted in that spectrum under FCC rules, if such services would otherwise have been subject to competitive bidding." Letter from the Honorable Larry Irving to Congressman Edward J. Markey, March 10, 1994, at Attachment page 1.

through retransmission consent or other non-advertising agreement. That channel should not be regarded as a feeable service, even though some non-advertising revenue might be received by the broadcaster. Also, if an advertiser wished a broadcaster to offer viewers a means to download data about its product when its advertisement is being aired, it might enter into an agreement under which it would compensate broadcasters for the number of customers who asked for the data. Although those payments might not resemble traditional advertising, they should not convert a free television signal into a feeable service.

By the same token, the Commission should assess fees only on revenues from subscriptions or other payments to transmit information. If a broadcaster chose to offer a subscription video or data service and sold advertisements on that service, those advertising revenues should not be included in any fee calculations. The fee should seek to recover the reasonable value of the spectrum that a broadcaster may use in providing a subscription or other non-advertising supported service; it should not be seen as a means of extracting a portion of other revenues that broadcasters may earn, such as advertising which is carried on subscription services.

### **The FCC Should Assess Fees on the Gross Revenues from Feeable Ancillary or Supplementary Services Carried on DTV Channels**

The Commission asks for comments on four different ways in which it might assess fees. It requests comment on whether it should establish fees based on the prices paid for spectrum used for similar services at auction, or whether it should instead assess a fee based on the gross or net revenues derived from feeable services, or instead whether it should adopt a hybrid approach of a flat basic fee coupled with a percentage of revenues earned from feeable ancillary

or supplementary services.<sup>8</sup> Broadcasters believe that, although there may be some theoretical advantages to each of these approaches, the Commission's objective of crafting an easily administered fee that will not discourage the development of innovative services would best be achieved by a fee on gross revenues, coupled with a two-year moratorium on fees for any new service.

### **Fees based on an auction model**

Although Congress suggested that the Commission attempt to set fees to equalize the amounts that might have been paid at auction for the spectrum needed to offer feeable ancillary and supplementary services, the Commission (*Notice* ¶¶ 15-16) correctly concludes that examining auction revenues would not a useful way of establishing fees for ancillary and supplementary services. Unlike most – if not all – of the services offered over auctioned spectrum, the ancillary and supplementary services that may be offered on digital television channels will be secondary uses. They will almost invariably be offered on a less than full-time basis, and the character of these services may vary over time, among licensees, and even on one

---

<sup>8</sup> The Commission also asks for comment (*Notice* ¶¶ 17-20) on the feasibility of placing a value on the DTV spectrum used for feeable ancillary and supplementary services using microeconomic theories. The complexity of the inputs required to make a determination of value makes this approach unworkable in practice. Further, given the incredible pace of change in digital technology, by the time the Commission calculated the estimated range of values for the spectrum, a new productivity innovation and new services could have been introduced and adopted, making the original estimates moot. The Commission itself recognizes the limit of this approach, stating that "[t]his conceptual approach can only approximate the implicit value of DTV spectrum over a range of possible quantities of the DTV capacity actually used, . . . since market-determined unit prices of DTV spectrum are unavailable." *Notice* ¶ 20. Given that the types, amounts, and prices of DTV ancillary and supplementary services will vary by time, market, and station, it is hard to imagine how this approach could be used to generate any useful information for the Commission to determine a fee structure.

television station. Each particular service – if a similar service is offered over auctioned spectrum – would have a different value derived from the prices the Commission obtained in the auctions for that spectrum.

Another complicating factor, as we point out below, is the fact that auction values have declined sharply and are expected to continue to go down in the future. The Commission would be required to frequently adjust the fees it sets for ancillary and supplementary services to take account of ongoing auction results.

Moreover, as the Commission notes, broadcasters may offer feeable services for differing periods of each day, and may use differing amounts of the digital bitstream for each service. Thus, the Commission is correct in concluding that, as a practical matter, it would be impossible to determine an appropriate auction-based fee for each type of ancillary service. Professor Hausman also concludes that "[t]he Notice correctly indicates that basing a fee structure on precise auction values to set fees for the spectrum used for ancillary services is impractical." Attachment A at 4. Even if a means of determining an auction-based fee could be developed, applying it to the range of feeable services that might develop would be administratively impossible without imposing huge costs on the Commission and significant disincentives for licensees to offer new forms of service to the public.

#### **Fees based on net revenues**

One alternative to an auction-based fee would be a fee on either the net revenues realized from a feeable ancillary or supplementary service, or a fee based on the incremental profits from such services. The Commission recognizes that a net revenue approach has the benefit of "fostering development of these new services." *Notice* ¶ 21. Professor Hausman agrees, stating

that "a fee based on net revenues would lead to higher consumer welfare than a gross revenue approach because the economic distortion is less."

In a perfect world, therefore, a fee based on net revenues would be the Commission's best choice since it would encourage development of new services and impose fees only on those that proved successful. However, as the *Notice* acknowledges, a net revenue based fee would involve licensees and the Commission in difficult accounting issues and related enforcement problems. Determining which of a broadcaster's costs should be allocated to ancillary and supplementary services would be difficult, particularly since different services might use a different mix of common resources. Further, if a broadcaster offered more than one type of feeable ancillary and supplementary service, there may well be additional allocation issues that could arise even among costs that are clearly attributable to feeable services. Much the same problems would arise with a fee based on incremental profits, since there still would be common costs between feeable and non-feeable services that would entail allocation decisions. The Commission (*Notice* ¶ 23) indicates the complexity of just an incremental profits approach by asking about what studies would be required to implement such a fee.

Broadcasters believe that the costs to both the Commission and licensees would exceed the economic benefits to be achieved from a net revenue approach. Using net revenues to set fees would inevitably involve the Commission in a host of detailed accounting decisions. The prospect of detailed FCC oversight of licensees' business decisions would effectively create a

similar deterrent effect to the choice of ancillary and supplementary services to offer as would other ways of calculating fees, while imposing higher enforcement costs on the Commission.<sup>9</sup>

### **"Hybrid" fees**

In paragraph 25 of the *Notice*, the Commission seeks comment on a combination fee which would involve a flat, upfront fee for the right to offer feeable ancillary and supplementary services, combined with a percentage of gross revenues. Professor Hausman points out that "[a]n upfront fee approach for ancillary services has extremely poor risk sharing characteristics and would likely lead to diminished entry of new ancillary services and decreased consumer welfare." Attachment A at 3. He later expands on this point, remarking that "any significant upfront payment as part of a hybrid fee approach is likely to have a potentially large distortion on entry decision, which would significantly reduce consumer welfare." *Id.* at 14. Particularly in the absence of any basis on which the Commission could reasonably predict the types and amounts of feeable ancillary and supplementary services that broadcasters will offer, the task of setting an appropriate upfront fee is almost impossible. If the upfront fee were set low enough to prevent most entry distortion effects, the amount of revenue it would generate would probably be insufficient to justify the reporting and enforcement costs involved in any fee program. A hybrid fee thus has the potential for harming the public interest by deterring innovation, while providing no meaningful benefit over a royalty on revenues.

---

<sup>9</sup> It may be, however, that some broadcasters will choose to offer feeable ancillary and supplementary services which may have easily identifiable costs or which may have relatively high revenues and low profit margins. It would be appropriate for the Commission to offer these licensees an option of making a showing of their net revenues and paying a fee on that basis.

### **Fees based on gross revenues**

A fee based on gross revenues would be far less complex than any of the alternatives discussed by the Commission. Broadcasters would only be required to report the total revenues they receive from each feeable ancillary and supplementary service. Calculation of the fee would also be a simple matter of applying a percentage to the gross revenue figure. In paragraph 14 of the *Notice*, the Commission indicates its preference for a gross revenues based fee.

As the Anderson report shows, gross revenues are also the typical way in which royalty arrangements are established for patent and other intellectual property licenses. Professor Hausman agrees, noting that patent royalties are typically based on gross revenues. Attachment A at 11-12. Using gross revenues as the basis for fees for ancillary and supplementary services would not require the Commission to inquire into the business decisions of licensees or to make difficult decisions about the way in which licensees allocate joint costs.

As Professor Hausman warns, however, "royalties based on gross revenues for ancillary services could lead to negative net revenues for a significant period of time, given the necessity for significant initial investment in developing the services." *Id.* at 12. Because a simple gross revenue based fee would impose costs on licensees before any new service is likely to become profitable, the disadvantage of a fee on gross revenues is that it may discourage broadcasters from offering certain services where the prospects of ultimate success are uncertain.

Broadcasters believe that the Commission can craft a fee structure that avoids the administrative, enforcement, and accounting costs of a net revenue fee, while minimizing the entry-detering effects of a simple gross revenue fee. Broadcasters propose that the Commission establish a fee of a percentage of the gross revenues broadcasters receive from a feeable ancillary



and supplementary DTV service, but refrain from collecting the fee for two years after a broadcaster first receives revenue from each such service.

Under this approach, broadcasters would be encouraged to develop new and innovative services. Although the length of time needed for a broadcaster to recover the costs involved in offering a new service will, of course, vary, two years should be adequate for a broadcaster to determine if a new service will obtain marketplace acceptance and to at least begin recovery of its costs. A two year delay in collecting fees on a new service would not result in any unjust enrichment for broadcasters because the initial period when a service is offered is almost certainly to be a period when the costs of developing, offering, and marketing a new ancillary service exceed any revenues. Once a service became established, fees would be collected on the gross revenues from that service.

### **The Commission Should Set a Low Fee to Encourage Development of New Services**

Broadcasters entirely agree with the Commission's reluctance "to set the percentage rate so high that it would dissuade broadcasters from providing feeable ancillary or supplementary services." *Notice* ¶ 27. This is consistent with Professor Hausman's conclusion:

"Most importantly, given my academic research findings that consumers benefit so greatly from the introduction of successful new services, the FCC should be careful not to set rates too high or it will distort entry decisions for new ancillary services. The relevant tradeoff is marginal increases in revenues from slightly higher rates versus the attempted introduction of a new ancillary service, which, if successful, will create a significant increase in consumer welfare. Given this tradeoff and the high degree of uncertainty about the future success of ancillary services, the Commission should initially set low rates." Attachment A at 10-11.

Dr. Anderson similarly points out that “the risk associated with future profits in the provision of ancillary services seems high given the newness of the technology and the total lack of broadcaster experience in the provision of these services.” Attachment B at 1. He continues: “the Commission might best achieve its objectives by setting the initial rate low.” *Id.* at 2.

In paragraphs 26 and 28 of the *Notice*, the Commission asks for comments on whether, in setting fees, it should take into consideration other factors such as preferences for one type of ancillary service or another or a preference for free rather than subscription services. Those considerations are not appropriate for the Commission at this time. The potential range of ancillary services cannot be known at the dawn of digital television service, and were the Commission to set varying levels of fees depending on the nature of the ancillary service offered by broadcasters, it could easily result in discouraging new services that the Commission might conclude are highly valuable to the public.<sup>10</sup>

Not only would it be bad policy for the Commission to attempt to pick winners and losers among DTV services, it would also exceed the Commission’s authority. Congress in adopting the flexible use provisions of the Telecommunications Act made a determination that the public interest would be advanced by the development of ancillary services on DTV channels, and the Commission should not use this proceeding to second guess that judgment.

---

<sup>10</sup> The Commission should also not attempt to vary fees based on the time of day a service is provided as suggested in paragraph 28 of the *Notice*. Without more knowledge of the particular types of services that will be offered, it would be imprudent and unnecessarily complicated to try to set fees based on assumptions of differing values for the time periods in which the services are provided.

Further, section 336(b)(2) of the Act gives the Commission authority to require certain amounts of advanced television services on DTV channels. As indicated above, the primary use of digital television signals will be the provision of fee television service. So long as one free, over-the-air service is offered to the public, the FCC should not (and has stated it does not wish to) intrude upon the decisions of broadcasters and the public concerning the most desirable mix of DTV services. In the unlikely event that evidence develops that some broadcasters are devoting excessive amounts of bitstream capacity to subscription services, the Commission would have ample authority under the Act to redress any imbalance then.

Turning to the specific question of the appropriate rate, the Hausman and Anderson studies provide two measures of value for the Commission to consider in setting fees. One obvious measure for the Commission to examine is the trend in the value of spectrum that it has made available for auction. Professor Hausman examines the results of the Commission's spectrum auctions and finds that the "[p]rices for spectrum auctioned by the FCC have been decreasing over time on a per MHz per population basis." Attachment A at 3. Overall, "the estimated effect is a decline of over 30% per year." *Id.* at 6. Indeed, "the trend in auction results is down regardless of the use to which the spectrum will be put or the degree of uncertainty over the success of the technology." *Id.* at 4.<sup>11</sup>

Hausman also points out that resolution of technical issues that once were thought to limit digitization of mobile telephony services has resulted in a great expansion of the capacity of existing spectrum assignments, further reducing demand for additional spectrum. *Id.* at 6-7. The

---

<sup>11</sup> Hausman notes that his conclusion that spectrum values will decline is shared by the Congressional Budget Office. Attachment A at 7 n.5.

Balanced Budget Act of 1997 and other measures require the Commission to auction additional allocations of spectrum, a factor which also will reduce spectrum values. *Id.* at 7. Recognizing this, the Commission recently proposed that it delay its next scheduled spectrum auction because of “an apparent lack of current public demand.” Letter from Chairman William E. Kennard to the Honorable W. J. Tauzin, April 23, 1998, at 1.

With respect to the value of spectrum that would be used for ancillary and supplementary services, Hausman’s findings show that there is “a very large discount in auction results for services that face significant business and technological uncertainty.” *Id.* at 8. Thus, “spectrum valuation for ancillary services will require a much higher discount rate than spectrum valuation for the PCS spectrum blocks.” *Id.* at 10. Hausman concludes, “the combination of overall declining auction results over time and the significant business and technological uncertainty with respect to sunk costs would lead to an expected outcome of relatively low auction results for spectrum used for ancillary services.” *Id.* at 8. Looking at auction values of other spectrum as a guide to setting a percentage rate for DTV ancillary and supplementary services, therefore, would lead the Commission to set a very low percentage fee since the high risks of ancillary services, coupled with overall declines in spectrum value, indicate that the spectrum used for ancillary services would not have a high value.

The Anderson study looks at a different counterpart on which to base a fee for ancillary and supplementary services. Dr. Anderson reviewed the rates at which different kinds of technology have been licensed in private negotiations. Significantly, he finds that “the royalty established for any particular technology is likely to be highly dependent upon the economics of the licensor and licensee in question.” Attachment B at 2. As Anderson points out, while the

royalty that was paid for a particular technology may not be directly relevant to the fees that should be charged for ancillary and supplementary services, “[i]t is . . . reasonable to look to the distribution of such royalty rates for guidance in setting a fee.” *Id.* at 3.

Dr. Anderson discusses four different studies of licensing fees. They showed that many rates are at or below two percent, and the majority are at five percent or less of gross revenues. One study found that 21 percent of royalties were two percent or less; another concluded that 34 percent were at 3 percent or less. Although these studies reveal little about the individual transactions surveyed, one divided transactions between categories of innovation, and Anderson points out that higher rates were characteristic of innovations with “highly favorable economics.” *Id.* at 4.

Such a result would be expected as both Hausman and Anderson find that increased uncertainty about technology and market demand leads to lower market prices, both for technology licensing or spectrum. In the case of feeable ancillary and supplementary services, the technology for offering them is largely undeveloped or untested, and there is no basis for any definitive analysis of the economics of these services. Thus, the marketplace is likely to regard investments in feeable ancillary and supplementary services as highly speculative. Accordingly, were the spectrum for such services to be sold at auction or licensed in private negotiations, the expected price would be quite low.

Broadcasters suggest that the Commission, therefore, set a rate of two percent of gross revenues for feeable ancillary and supplementary services beginning two years after revenue is received for a service. That fee level is well within the range of private sector licensing fees, but is at the lower end of that range – an appropriate choice given the uncertainties surrounding

ancillary services and the public interest in encouraging the development of new technologies and services. The Act requires the Commission to report on its fee program in 2001. 47 U.S.C. § 336(e)(4). At that time, the Commission can assess the development of feeable ancillary and supplementary services and make any adjustments in the fee level that experience warrants.

## **Conclusion**

The Commission should approach the task of setting a fee for ancillary and supplementary services on digital television channels with the objective of encouraging the development of new uses for broadcast channels. It should carefully define which services are subject to fees. Because any approach using an upfront fee would discourage innovative services, and using net revenues to set fees would require undue FCC involvement in licensees' business decisions, the Commission should adopt a fee based on the gross revenues licensees receive from feeable services. To ameliorate the impact of a gross revenue based fee, the Commission should not collect fees on new services for two years after licensees first receive revenues from them.

The Commission should set the initial fee level low to avoid discouraging the growth of new products and services. Based on the declining values of spectrum as shown in recent

auctions, and the range of royalties from private technology licensing agreements, the Commission should set a fee of two percent of gross revenues.

Respectfully submitted,



Henry L. Baumann  
Jack N. Goodman  
Valerie G. Schulte

Mark R. Fratrik, Ph.D.  
NAB Research & Planning

NATIONAL ASSOCIATION  
OF BROADCASTERS  
1771 N Street, N.W.  
Washington, D.C. 20036  
(202) 429-5430



Victor Tawil  
Senior Vice President  
ASSOCIATION FOR MAXIMUM  
SERVICE TELEVISION, INC.  
1776 Massachusetts Avenue, N.W.  
Washington, D.C. 20036  
(202) 861-0344

May 4, 1998

## **ATTACHMENT A**



Statement of Professor Jerry A. Hausman

1. My name is Jerry A. Hausman. I am MacDonald Professor of Economics at the Massachusetts Institute of Technology in Cambridge, Massachusetts, 02139.

2. I received an A.B. degree from Brown University and a B.Phil. and D. Phil. (Ph.D.) in Economics from Oxford University where I was a Marshall Scholar. My academic and research specialties are econometrics, the use of statistical models and techniques on economic data, and microeconomics, the study of consumer behavior and the behavior of firms. I teach a course in "Competition in Telecommunications" to graduate students in economics and business at MIT each year. Competition among broadcast TV, cable providers, and DBS are among the primary topics covered in the course. In December 1985, I received the John Bates Clark Award of the American Economic Association for the most "significant contributions to economics" by an economist under forty years of age. I have received numerous other academic and economic society awards. My curriculum vitae is included as Exhibit 1.

3. I have done a significant amount of research in the telecommunications industry. I have published numerous papers in academic journals and books about telecommunications. I have also edited two books on telecommunications, Future Competition